Hepatitis Headlines

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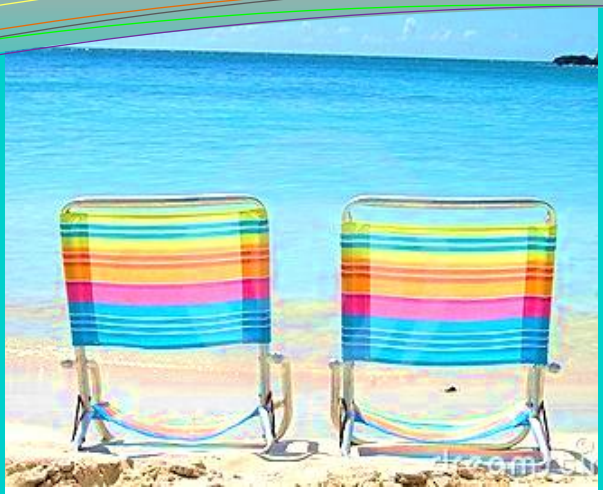
Viral Hepatitis Surveillance and Prevention Unit, Michigan Department of Community Health
www.michigan.gov/hepatitis



In this issue

May: Hepatitis Awareness Month

May was Hepatitis Awareness month and we wanted to take an opportunity to highlight some of the events and activities that MDCH participated in to help promote awareness of viral hepatitis.

Firstly, MDCH's Information Office helped spread the word by distributing a press release and sending messages out through the MDCH Twitter and Facebook pages.

The Viral Hepatitis Unit presented viral hepatitis information at the MDCH CD Conference and the Michigan Society of Infection Prevention and Control (MSPIC) Spring Conference. The VH Unit also presented data at a Hepatitis Awareness event at the Capitol on May 21st.

Congress also contributed by officially declaring May as Hepatitis Awareness Month in Michigan! In subsequent years we hope to expand on Hepatitis Awareness Month by partnering with more groups from across the State.

--Chardé Fisher

New Hepatitis C Case Classification Flowchart

On May 15th, at the 14th Annual Michigan Communicable Disease Conference, a presentation was given on the public health significance of Hepatitis C Virus (HCV) and HCV surveillance and reporting. A new version of the slides (which should now be easier to read) can be downloaded here. Also at the conference, the Viral Hepatitis Unit released a new Hepatitis C Case Classification Flowchart. Though the requirements for HCV case classification have not changed, 'Flowchart 2.0' has been rearranged to be easier to apply. Instead of starting with signs and symptoms of HCV, the flowchart now begins with laboratory data, since this is typically the first information case managers receive on an HCV patient.

There were a few other items that came up during the CD Conference that I think are worth reiterating. A question was brought up in regard to interpretation of quantitative HCV laboratory results. I think a good summary of the best way to interpret these results can be found on Mayo's website here. In short:

> *"An 'Undetected' result indicates that the HCV is absent in the patient's serum specimen….a result of '<15 IU/mL (<1.18 log IU/mL)' indicates that HCV RNA is detected, but the HCV RNA level present cannot be quantified….a result of '<15 IU/mL mL (<1.18 log IU/mL)' should not be considered equivalent to an 'Undetected' result."*

Finally, we have received a few post-conference questions relating to MDCH's expectations for HCV case follow-up. As always, follow-up and investigation of each case is recommended. However, because the burden of HCV is high, and in the event of an overwhelming number of cases and limited local health department staffing and resources, it is logical to adapt a hierarchical method of follow-up focused on cases of greatest public health importance. We would rank acute cases, persons aged 18-29, and those born before 1945 as the groups of greatest concern. Please feel free to contact us if you are ever unsure about a case or a laboratory result; we're always happy to provide a second opinion. --Joe Coyle

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Michigan Department of Community Health
MDCH
Rick Snyder, Governor
James K. Haveman, Director

Updated Hepatitis Brochures:

The following hepatitis brochures have been recently updated:

- **Hepatitis B: What Parents Need to Know - rev 5/14**
- **The Dangers of Hepatitis B - rev 1/14**
- **Viral Hepatitis: What you need to know - rev 1/14**

The revised brochures identify the importance of testing those who were born between 1945-1965 for HCV and the need for hepatitis A and B vaccines. For additional information visit www.michigan.gov/hepatitis

The brochures can be ordered online at www.healthymichigan.com.

Perinatal Hepatitis B Prevention Program (PHBPP) Updates

Dawn Onye, our SE MI case manager, has moved on to new adventures. We would like to recognize and thank Dawn for all she did for the PHBPP. In addition, we would like to welcome Aleigha Phillips who has joined the PHBPP team as the new SE MI case manager. Please join us in welcoming her. Aleigha can be reached at PhillipsA3@michigan.gov or at 313-456-4432. For more info about the PHBPP go to michigan.gov/hepatitisb.

--Pat Fineis

Viral Hepatitis and HIV Co-infections in Michigan

In the United States, people with HIV infection are disproportionately infected with viral hepatitis. It is estimated that about one-third of HIV cases in the United States are infected with either Hepatitis B Virus (HBV) or Hepatitis C Virus (HCV). Viral hepatitis can cause complications in the treatment and management of HIV/AIDS. Liver decompensation is 80% higher in HIV/HCV co-infected patients as opposed to HIV mono-infected patients. Clearly, the prevention of these co-infections has major individual and public health implications.

All HIV/AIDS cases reported to the Enhanced HIV/AIDS Reporting System (eHARS) and all HBV and HCV cases reported to the Michigan Disease Surveillance System (MDSS) from 2004-2013 were extracted for inclusion in this study. The two datasets were matched using Link Plus, a probabilistic record linkage program, based on the client's first name, last name, and date of birth. Duplicate matches were removed from the final count.

It was determined that 804 HBV cases and 1068 HCV cases were reported to be co-infected with HIV/AIDS between 2004 and 2013. The primary risk transmission category for the HBV/HIV co-infected was men who have sex with men (MSM), while injection drug use (IDU) was the main risk for those co-infected with HCV/HIV. The majority of HBV/HIV co-infected cases were aged 30-49, while HCV/HIV co-infected cases were predominantly 40-59 years old.

HIV/Viral Hepatitis Co-infections	Hepatitis B	% Hepatitis B	Hepatitis C	% Hepatitis C
n	804		1068	
Age at Co-infection				
0-19	7	0.9%	4	0.4%
20-29	102	12.7%	53	5.0%
30-39	231	28.7%	127	11.9%
40-49	286	35.6%	342	32.0%
50-59	140	17.4%	433	40.5%
60+	38	4.7%	109	10.2%
HIV Transmission Risk				
Men who have sex with Men (MSM)	461	57.3%	176	16.5%
Injection Drug Use (IDU)	83	10.3%	472	44.2%
MSM/IDU	34	4.2%	134	12.5%
Blood Recipient	7	0.9%	34	3.2%
Heterosexual Contact	77	9.6%	125	11.7%
Perinatal	1	0.1%	2	0.2%
Unknown	141	17.5%	125	11.7%

Over 90% of co-infected cases were reported to eHARS with HIV/AIDS before they were reported to MDSS with HBV or HCV. On average, HBV was diagnosed 8 years post-HIV diagnosis and HCV 10 years post-HIV diagnosis. Persons with HIV were either co-infected at the time of HIV-diagnosis or they contracted viral hepatitis in subsequent years. In either scenario, the lag in identification of co-infections suggests that public health has room for improvement. HIV patients are either not getting tested promptly for HBV and/or HCV or they are not receiving bloodborne pathogen counseling and prevention messages when diagnosed with HIV (e.g. HBV vaccine). Co-infections cause accelerated liver decompensation and worse health outcomes. Therefore, preventing HIV patients from contracting viral hepatitis (and vice-versa) can greatly increase clients' quality of life and should be a focus of future public health prevention efforts.

--Geoff Brousseau

United States Preventative Services Task Force Recommendation to Screen High Risk Persons for Hepatitis B

The U.S. Preventive Services Task Force (USPSTF) has released a new recommendation for screening of hepatitis B virus (HBV) infection. The USPSTF recommends that all individuals at high-risk should be screened for HBV infection with an FDA-approved hepatitis B surface antigen test. The specific population targeted by the recommendation is "asymptomatic, non-pregnant adolescents and adults who have not been vaccinated for hepatitis B virus (HBV) infection and other high-risk persons". HBV infection risk groups are defined as:

- Persons born in countries and regions with high prevalence of HBV infection (≥ 2%) *See Table 1.*
- US born persons not vaccinated as infants whose parents were born in regions with a high prevalence of HBV infection (≥ 8%), such as sub-Saharan Africa and southeast and central Asia
- HIV positive individuals
- Injection drug users
- Men who have sex with men
- Household contacts of individuals with HBV infection

Table 1. **Geographic Regions With a Prevalence of Hepatitis B Surface Antigen ≥2%***

Region†	Countries‡
Africa	All
Asia§	All
Australia and South Pacific	All except Australia and New Zealand
Middle East	All except Cyprus and Israel
Eastern Europe	All except Hungary
Western Europe	Malta, Spain, and indigenous populations in Greenland
North America	Alaska natives and indigenous populations in northern Canada
Mexico and Central America	Guatemala and Honduras
South America	Ecuador; Guyana; Suriname; Venezuela; and Amazonian areas of Bolivia, Brazil, Colombia, and Peru
Carribean	Antigua and Barbuda, Dominica, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, and Turks and Caicos Islands

This recommendation replaces the previous USPSTF Hepatitis B Screening recommendation released in 2004.

In 2004 the USPSTF recommendation focused only on the general population. At that time there was little evidence to support screening for HBV infection in the general public. However, since 2004, new studies have been published focusing on gaps identified in the original recommendation. Based on new evidence, the USPSTF updated its recommendation with a focus on high-risk populations.

The rationale for the recommendation is that 15-25% of persons with HBV die of cirrhosis or hepatocellular carcinoma. Screening can identify chronically ill persons who may benefit from treatment and surveillance for liver cancer, which can improve quality of life and save lives.

The 2004 recommendation for the screening of asymptomatic persons only received a grade D rating while the new recommendation has a B grade. Under the Affordable Care Act, most private insurers and all Medicaid programs must cover any preventive service with an A or B recommendation. The USPSTF recommendation is now consistent with those from CDC and the AASLD.

Recommendations for prenatal HBV infection screening can be found in a separate USPSTF recommendation. The current recommendation states that pregnant women should be screened for HBV infection at the first prenatal visit. Any updates to this recommendation will be made in the future and were not included in this recommendation.

Further detail on the 2014 USPSTF HBV infection screening recommendations can be found on the US Preventative Services Task Force website.

--Emily Goerge

Pro Wrestler Wins $2.3 million in HCV Lawsuit

Devin 'Hannibal' Nicholson recently won a $2.1 million lawsuit, successfully arguing that he contracted hepatitis C from WWE Hall of Famer Larry Shreve (aka Abdullah the Butcher) during a match in 2007.

A big part Shreve's act was shedding blood, which he would do by 'blading' himself with a concealed razor. This practice has a long history in wrestling and is thought to enhance the theatricality of the performance. A Canadian court ruled that this practice was likely responsible for Nicholson's HCV infection. Medical records showed that both men carried rare HCV genotypes, making a common source likely.

Nicholson was set to join the WWE in 2009, but when he tested positive for HCV his contract was rescinded. The $2.1 million compensates Nicholson for losing out on a WWE career. 'Hannibal', who has reportedly completed successful HCV treatment, celebrated the court's decision by performing the Sacrifice Power Bomb on his lawyer.

--Seth Eckel

Hepatitis C Infections Resulting from Drug Diversion

A recent article in the journal *Mayo Clinic Proceedings* describes six outbreak investigations occurring over the past 10 years in which health care workers tampered with controlled substances, resulting in the transmission of infections to patients. Four out of the six outbreaks described in the article involved personnel who tampered with syringes or vials containing fentanyl. In these outbreaks, four health care workers infected with hepatitis C virus (HCV) transmitted their infection to at least 84 patients. Nearly 30,000 patients were potentially exposed to blood-borne pathogens and were notified to receive testing.

A news article in USA Today also recently reported on the epidemic of substance abuse among healthcare workers. The article estimates that more than 100,000 healthcare workers are currently abusing or dependent on prescription drugs and that 1 in 10 may suffer from drug abuse in their lifetime. Additional reports show that this problem is pervasive and can impact all types of healthcare facilities including hospitals, surgery centers, and assisted living facilities.

Of course, Michigan is not immune to this phenomenon. On December 6th, 2013, in two separate instances, healthcare workers from the same hospital overdosed on medications intended for patients. Both clinicians were found unresponsive in bathrooms. In one of the instances, a nurse died and in the other an anesthesiology resident was found in cardiac arrest, but survived.

In addition, David Kwiatkowski, a healthcare technician who recently pleaded guilty to fentanyl drug diversion that led to 45 patients contracting HCV in multiple states, was originally from Michigan. Kwiatkowski, who is currently serving 39 years in prison, worked at four Michigan hospitals between 2005 and 2007. Fortunately, no evidence of HCV transmission to patients was discovered in the Michigan investigation.

With the well documented rise in prescription pill abuse and subsequent increases in injection opioid use around the country and in Michigan, it would be no surprise if reports of drug diversion became more common.

Healthcare worker diversion of medications intended for patients (particularly pain medications), have the potential to cause major patient safety and public health concerns. First, patients are deprived of medications to treat their pain, impaired healthcare providers may deliver substandard care, and there is a risk of transmitting blood-borne pathogens like HBV, HCV, and HIV.

In response to these growing risks, the CDC has launched a website focused on drug diversion involving health care workers who steal controlled substances for their own use (cdc.gov/injectionsafety/drugdiversion). Please visit the website for a list of prevention resources, information on drug enforcement agencies and other national organizations, peer-reviewed articles, and other useful links.

--Kim Kirkey

Save the Date

9/3 – HCV Advocate Training Detroit*

9/5 – HCV Advocate Training Grand Rapids*

10/9-10/10 – MSIPC Fall Conference

10/29-10/31 – MSIPC Fundamentals

**More info coming soon*

Helpful Links

www.michigan.gov/hepatitis

www.michigan.gov/hepatitisb

www.michigan.gov/cdinfo

www.michigan.gov/hai

CDC Hepatitis

Know More Hepatitis Campaign

Know Hepatitis B Campaign

CDC Hepatitis Risk Assessment

Hepatitis A

Hepatitis B

Hepatitis C

USPSTF

AASLD

Institute of Medicine Report

One and Only Campaign

Injection Safety Resources

Hepatitis Occupational Exposure Guideline

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